



## **Troubleshooting Guide for Cisco Unified Videoconferencing 3500 MCU Releases 5.5 and 5.6**

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### **Americas Headquarters**

Cisco Systems, Inc.  
170 West Tasman Drive  
San Jose, CA 95134-1706  
USA  
<http://www.cisco.com>  
Tel: 408 526-4000  
800 553-NETS (6387)  
Fax: 408 527-0883

Customer Order Number:  
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# CHAPTER 1

## Troubleshooting the Cisco Unified Videoconferencing 3500 MCU

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This section covers problems you might encounter when configuring, operating and managing the, Cisco Unified Videoconferencing 3500 MCU and provides suggested actions you can perform to solve the problems.

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- [Resolving Front Panel LED Issues, page 1-2](#)
- [Resolving MCU Conference Initiation Failure, page 1-3](#)
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## Resolving MCU Failure to Register with the Gatekeeper

This section describes what to do if the MCU fails to register with the Cisco IOS H.323 Gatekeeper.

**Table 1-1** *Resolving MCU Failure to Register with the Gatekeeper*

Possible Causes	Verification Steps
The gatekeeper address is set incorrectly.	Verify the gatekeeper IP address settings.
TCP/IP setup issue.	<ul style="list-style-type: none"> <li>Verify that the MCU is assigned a unique IP address.</li> <li>Verify that the subnet mask and default gateway subnet mask are set correctly.</li> </ul>
LAN or cable problem	<ul style="list-style-type: none"> <li>Verify the switch port settings.</li> <li>Verify that the Ethernet cable is straight through.</li> <li>Try another Ethernet cable.</li> </ul>

## Resolving Front Panel LED Issues

This section describes what to do if MCU module front panel LEDs are off at all times, including during the power off, power on cycle.

**Table 1-2** *Resolving Front Panel LED Issues*

Possible Causes	Verification Steps
Power supply problem	<ul style="list-style-type: none"> <li>Make sure that the power supply LED is green.</li> <li>Check the AC cable and fuse.</li> </ul>
The MCU module is not inserted correctly in the Cisco Unified Videoconferencing 3545 chassis, or a back plane pin is bent.	<ul style="list-style-type: none"> <li>Open the telecom latch screws and extract the MCU module from its slot.</li> <li>Verify that there are no bent pins on the back plane (using a flashlight, if necessary).</li> <li>Re-insert the MCU module carefully closing the latches.</li> </ul>

# Resolving MCU Conference Initiation Failure

This section describes what to do if MCU conference initiation fails.

**Table 1-3** *Resolving MCU Conference Initiation Failure*

Possible Causes	Verification Steps
The MCU is set to work with an external authorization server, but no authorization server is configured.	Verify that the External conference authorization policy option is set to None in MCU > Settings > Advanced.
The MCU is set to work with an external authorization server, but the authorization server is not configured properly to work with the MCU.	Verify that the MCU IP address is correctly configured in the authorization server.
The MCU is set to prevent endpoints from creating conferences.	Verify that the Conferences can be created using option is set to Scheduler, Web, Control API and dial-in in MCU > Settings > Advanced.
There are not enough MCU resources available for the desired conference.	<ul style="list-style-type: none"> <li>• Verify that the service you are using reserves the minimum number of parties (2).</li> <li>• Verify that current calls are not utilizing all resources by checking the available MCU capacity and then trying to disconnect other calls in order to find the problem.</li> </ul>
The service requires one EMP video processor but no EMP module appears to be registered with the MCU.	<ul style="list-style-type: none"> <li>• Ping the EMP module.</li> <li>• Open a Telnet connection to the IP address of the required EMP module.</li> <li>• Open a serial connection to the EMP module if there is no response from the IP address.</li> <li>• Enter the advanced command <b>modifyTargetDevice</b> to ensure that the EMP is configured to work with the correct MCU.</li> </ul> <p>You can perform this operation using the serial connection via the countdown menu visible after rebooting the EMP.</p> <ul style="list-style-type: none"> <li>• Reboot the EMP after modifying the controlling MCU.</li> </ul>

## Resolving Conference Access Failure

This section describes what to do if an endpoint cannot be invited to a conference or dial into a conference.

**Table 1-4** *Resolving Conference Access Failure*

Possible Causes	Verification Steps
The MCU is configured to work with an authorization server but the endpoint is not authorized and therefore the authorization server rejects the call.	Check if the endpoint is authorized in the authorization server.
The endpoint is currently in a call.	Confirm that the endpoint is not busy/in a call.
There are not enough MCU resources available for the desired conference.	Remove one of the current participants to verify that the endpoint can join successfully.

## Resolving Cascading Failure

This section describes what to do if MCU conference cascading fails.

**Table 1-5** *Resolving Cascading Failure*

Possible Causes	Verification Steps
The invited conference does not exist and the remote MCU is not in Ad Hoc (Scheduler, Web, Control API and dial-in) mode.	<ul style="list-style-type: none"> <li>Using the remote MCU web interface, verify that the remote conference exists or that the Conferences can be created using option is set to Scheduler, Web, Control API and dial-in in MCU &gt; Settings &gt; Advanced.</li> <li>If ad hoc conferencing is not allowed for the remote MCU, and the remote conference does not exist, create the conference and then cascade it (Web/dial invite).</li> </ul>
Service prefixes are not unique and there is service prefix conflict.	Verify that all cascaded MCU modules have unique service prefixes.
The remote MCU module is not registered with its gatekeeper.	Verify proper registration of all MCU modules with their respective gatekeepers.
Not enough ports are available to accomplish cascading. <b>Note</b> Cascading requires one port from each conference.	Check that the number of free ports on each EMP used is not zero.
Services are not synchronized.	Verify that service definitions do not include differences such as H.235 being enabled on one conference only.



## Resolving Quality Issues in Cascaded Conferences

This section describes what to do if a cascaded conference suffers long delays or bad lip synchronization.

**Table 1-6** *Resolving Quality Issues in Cascaded Conferences*

Possible Causes	Verification Steps
Unsuitable topology used (for example, chain topology used unnecessarily).	<ul style="list-style-type: none"> <li>One single central MCU should invite all other cascaded MCUs.</li> <li>We recommend that you do not have more than one level of cascaded MCUs.</li> <li>Use a star topology, where the central MCU is in the center of the star, and other cascaded MCU modules are on the arms of the star.</li> </ul>

## Resolving Endpoint Disconnection Issues

This section describes what to do if endpoints unexpectedly drop out of the MCU conference.

**Table 1-7** *Resolving Endpoint Disconnection Issues*

Possible Causes	Verification Steps
Unreliable network link.	Check network link quality (round trip time should be less than 300 msec).

## Resolving Unexpected Conference Termination

This section describes what to do if a conference on the MCU unexpectedly terminates.

**Table 1-8** *Resolving Unexpected Conference Termination*

Possible Causes	Verification Steps
The Ad hoc conferences terminate when the option in MCU > Settings > Advanced is set to Conference creator leaves and Conference creator has left the conference.	Set the Ad hoc conferences terminate option in MCU > Settings > Advanced to Last participant leaves.
Unreliable network link between the MCU and the gatekeeper.	Check network link quality (round trip time should be less than 300 msec).

## Resolving Presentation Issues

This section describes what to do if you cannot start or receive a presentation during a conference.

**Table 1-9** *Resolving Presentation Issues*

Possible Causes	Verification Steps
H.239 functionality is not enabled on the endpoint.	<ul style="list-style-type: none"> <li>Verify that H.239 is enabled on the endpoint.</li> <li>Make a point-to-point call to another endpoint and verify that you can start a presentation.</li> </ul>
The presentation is not configured in the MCU service used in the conference.	Configure the service to support presentation in MCU > Services.
MCU presentation definitions in the service are not supported by the endpoint (frame rate, frame size, codec).	Check that the endpoint supports the frame size, frame rate and video codec as defined in the service.

## Resolving Participant Connection Issues

This section describes what to do if you have difficulty connecting 96 participants in a conference even though there are enough EMP resources available.

**Table 1-10** *Resolving Participant Connection Issues*

Possible Causes	Verification Steps
<p>The MCU is configured to support DTMF detection during the call.</p> <p>DTMF detection reduces the number of supported audio ports from 96 to 72.</p>	Disable DTMF detection via the advanced commands.

## Resolving Unexpected SIP Call Disconnection

This section describes what to do if a SIP call unexpectedly disconnects after 30 seconds.

**Table 1-11** *Resolving Unexpected SIP Call Disconnection*

Possible Causes	Verification Steps
DNS is not fully configured on the MCU and user agents.	Verify that DNS is configured on user agents and the MCU.

## Resolving Audio and Video Issues in SIP Calls

This section describes what to do if audio or video channels in SIP calls do not open.

**Table 1-12** *Resolving Unexpected SIP Call Disconnection*

Possible Causes	Verification Steps
The MCU does not publish all its capabilities when inviting other participants.	Check the Use Empty Invite when sending invites to endpoints option in MCU > Protocols > SIP > Advanced.

## Resolving Sending CIF to High Definition End Points Issues

A high definition endpoint may not be able to receive CIF.

**Table 1-13** *Issues with Sending CIF to High Definition End Points*

Possible Causes	Verification Steps
The Welcome Screen of the MCU is CIF.	Use the Advanced Command to disable the welcome screen.

